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CONFERENCES - PAMPHLET BOX - 1928

COLONY AND PROTECTORATE OF KENYA.



AGRICULTURAL DEPARTMENT.

REPORT OF THE PROCEEDINGS OF
THE FIFTH MAIZE CONFERENCE
AND FIRST WHEAT CONFERENCE
AUGUST, 1928

NAIROBI:
PRINTED & PUBLISHED BY THE GOVERNMENT PRESS.
To be purchased from the Government Printer
or through any bookseller.
1928.
Price 1/- Net.

Report of the Proceedings of the Fifth Maize Conference and First Wheat Conference.

HELD AT NAIROBI—AUGUST, 1928.

IN THE LIBRARY OF THE DEPARTMENT OF AGRICULTURE,
August 7th, 8th and 9th of 1928.

Note.—Owing to the fact that several items on the Agenda of each conference concerned both conferences, common session of both was held on August 8th and 9th to discuss such issues.

These reports are therefore presented in the following forms :—

1. Maize Conference.
 2. Wheat Conference.
 3. Items on the Agenda of either Conference discussed by joint conference.
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PART I.

MAIZE CONFERENCE.

The following representatives attended this Conference :—

HON. ALEX HOLM, C.B.E., *Director of Agriculture*
(Chairman).

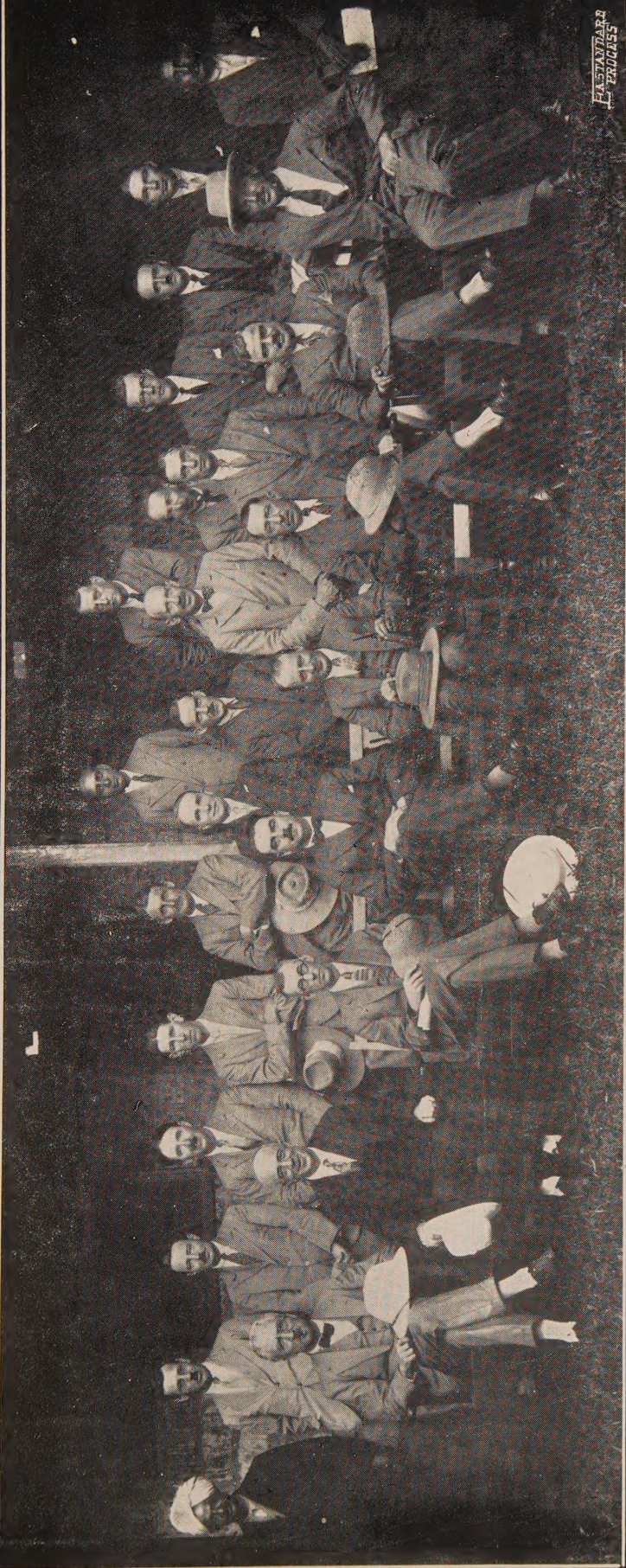
HON. SIR C. FELLING, K.B.E., C.M.G., *General Manager,*
Kenya and Uganda Railway.

COL. W. K. TUCKER, C.B.E.	}	<i>Kenya Farmers' Association.</i>
COL. C. G. GRIFFITHS, C.M.G.		
COL. D. PUDSEY		
MAJOR C. GAITSKELL	}	<i>Convention of Associations.</i>
MR. J. E. HARPER		
MR. G. A. TYSON	}	<i>Nairobi Chamber of Com- merce.</i>
MR. H. B. HAMILTON		
MR. R. J. SHELDON	}	<i>Mombasa Chamber of Com- merce.</i>
MR. A. M. CAMPBELL		
MR. KAMROADDIN	}	<i>Conference Shipping Lines.</i>
MR. LAHORI RAM		
	}	<i>Indian Association.</i>

In attendance.

MR. C. C. T. SHARP, Chief Grader and Inspector	}	<i>Department of Agriculture.</i>
MR. G. J. L. BURTON, Plant Breeder		
MR. D. L. BLUNT, Secretary		
MR. C. B. C. HANDLEY		

MAIZE AND WHEAT CONFERENCE.



Delegates to the Conference held in Nairobi, on August 8. Names : Standing (back row) : Mr. Kamroadin, Mr. G. J. L. Burton. Standing : Mr. Daulat Ram, Mr. V. A. Beckley, Mr. J. McDonald, Mr. R. Hall, Mr. J. D. Chater, Capt. E. Pardoe, Mr. Constantine, Capt. H. Sayer, Col. D. Pudsey, Mr. D. L. Blunt, Mr. A. J. Sheldon, Mr. C. C. T. Sharp, Mr. H. B. Hamilton, Mr. C. B. C. Handley, Mr. Rallaram Aggerwall. Seated : Major C. Gaitskell, Mr. A. M. Campbell, Hon. Sir C. Felling, Hon. Alex Holm (Chairman), Col. G. C. Griffiths, Col. W. K. Tucker, Mr. G. A. Tyson, Major F. de V. Joyce.

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AGENDA.

1. Opening statement of the Director of Agriculture.
2. Annual Report of the Chief Grader and Inspector.
3. Financial Statements *re* Grading and Conditioning Services.
4. Consideration of Schedule *re* Maize Grade—Advisability of amending “ Flat White No. 1 ” by deleting “ 1 per cent.” and substituting “ 3 per cent.” in order to establish this as a commercial grade.
5. Discussion on “ Drying Plant ” (K.F.A.).
6. Consideration of the provision of some form of appeal from the grader’s decision as to moisture content (K.F.A.).
7. Greater measure of co-operation between maize farmers and co-operative societies, taking steps to secure this with the aid of legislation when advisable. (Trans Nzoia Farmers’ Association).
8. As the majority of farmers are debarred from obtaining financial assistance from the Land Bank by reason of their indebtedness to existing banks, Government to give sympathetic consideration to the claims of co-operative societies for short-term loans from the Land Bank to assist their members who would otherwise receive no pecuniary assistance from its institution.
9. Advisability of introducing legislation to regulate the sale of fertilisers and pest remedies.
10. Consideration of the question of the reduction of the “ Free Storage ” period on maize.
11. Grading in private go-downs.
12. Statement by Plant Breeder on maize improvement.
13. Appointment of Maize Consulting Committee.
14. Any other business.

OPENING OF THE CONFERENCE.

Before opening the Conference the Chairman (HON. ALEX HOLM, C.B.E.) proposed a vote of condolence with Mrs. Nicholson and his partner, Mr. W. C. Hunter, on the recent death of Major Nicholson, who had attended a previous conference and had been nominated to represent the Nairobi Chamber of Commerce at this Conference.

The vote was carried and the Chairman was asked to convey the condolences of the Conference to Mrs. Nicholson and Mr. W. C. Hunter.

The Chairman informed Conferences that he had invited His Excellency the Governor to open the Conferences but that His Excellency was regrettably unable to do so on account of his absence at the Coast.

In an opening address to the Conference, MR. HOLM said: "I welcome new delegates to this, the Fifth Maize Conference, and I am glad to see, among others present, some who attended the First Maize Conference held in 1923, also members of the Maize Consulting Committee which continues to perform useful service for the maize industry and forms a valuable and representative link between maize interests and Government.

After consideration that Committee advised that the need did not exist to hold a Conference last year, as no major questions demanded attention. The report of the Chief Grader for the year ending June 30th, 1927, was, however, prepared as usual, circulated to interested bodies and published.

I would now refer shortly to some of the questions dealt with by the Maize Consulting Committee last year.

- (1) A proposal to ship lower grades of maize in bulk as a mixed parcel was not recommended, after consultation with the London Corn Trade Association.
- (2) Rules providing for the use of second-hand bags for bulk shipment were introduced and a difficulty which arose in connection with consignments in trucks containing both new and second-hand bags was dealt with.
- (3) Congestion at the Maize Conditioning Plant in the previous season, due to circumstances beyond control, was considered, but the Committee was not prepared to recommend Government to extend the Maize Conditioning Plant, and they advised that further consideration be given to the matter when the attitude of private enterprise in regard to provision for this service was known.
- (4) The advisability of certain services, *e.g.*, maize conditioning, being undertaken by the Port Authority was considered but the Committee made no recommendation.

- (5) Attention was directed to the need for sufficient notice being given to the Chief Grader in regard to consignments forwarded direct to the Conditioning Plant.
- (6) The continuation of the use of Mark " C " in respect of maize treated for weevil destruction was advised pending further consideration. In this connection I now report having conferred with maize interests while in London and advise that no change should be made at present. It appeared that the value of the grading certificate might be discounted if that mark were discontinued and that it was inadvisable to take a step which might be misunderstood and which might create suspicion.

Standard samples of the different grades were again prepared and widely distributed and they appear to have given entire satisfaction. I do not propose to refer in detail to matters which will be placed before you in the report of the Chief Grader, but I take this opportunity of referring in general terms to the position of the maize industry.

Its prosperity affects a larger proportion of the community than any other industry in the Colony. Maize is a main crop not only of European farmers but of the native population and to a degree not always realised, trade and commercial interests are affected by its progress. While so many people are dependent upon it for their livelihood and sustenance it is unfortunately a low-value crop and in all our considerations of cost of production, railway freight rates, cost of handling at the port and marketing, it behoves us to bear in mind that we have to compete with other countries in the world where the industry is well organized, and I am confident that the right and only policy which can wisely be adopted in this Colony is to see by every means in our power that the cost of marketing Kenya maize in the oversea markets is kept as low as possible, otherwise during those periods when world's market prices fall the industry will surely languish and the general prosperity of the Colony will suffer. When benefits said to be conferred upon the maize industry are under discussion it should be borne in mind that collateral advantages are derived by other activities and by the community.

The progress of the maize industry has been rapid and continuous until last year, when there was a check in the increase of area under cultivation, in all probability due largely to the interest taken in wheat-growing, also to adverse planting

conditions in June and July last. The acreage harvested rose from 32,109 acres in 1920, to 177,987 acres for the 1926-27 crop. The last figures available in respect of areas planted show a small reduction of 595 acres as at July 31st, 1927; the figures being for July 31st, 1926, 193,187 acres; and July 31st, 1927, 192,592 acres.

Over a period of years the yield per acre has ranged from 6 to 7.7 bags per acre. These yields are high as compared with other countries.

The Agricultural Census about to be taken will reveal the position in respect of acreage and production of the crop now on the land, and it is gratifying to be able to announce that present indications point to a record crop throughout the country this season.

But I desire again to repeat a warning that I have given on other occasions. To a great extent these high yields with attendant profits are derived from soil capital—the inherent fertility of the soil—and the time has already arrived when greater attention should be given not so much to improving but to maintaining that soil fertility. From such experimental work as the Department of Agriculture has been able to carry out, coupled with information derived from soil analysis, advice which is likely to prove sound can be given as to the treatment of land, and in the absence of experiment stations situated in different parts of the country I would urge upon maize growers to put down on their own farms what may be called “farmers’ experiments”—*i.e.*, such experiments as come within the range of what a farmer is able to carry out.

The Agricultural Chemist will gladly advise as to the design of such an experiment, also with regard to the choice of fertilisers to be used on an extended scale.

Next in importance to the maintenance of soil fertility is the improvement of yield through seed selection. There is evidence of deterioration in production through the absence of proper care being exercised in the choice of seed planted. The Plant Breeder will in the course of this Conference’s deliberations, speak about the work of the Department of Agriculture and of the steps which should be taken by growers.

In this connection I must mention that in fulfilment of their promise to assist financially in meeting the cost of plant-breeding services for maize, the Kenya Farmers’ Association has paid the sum of £473 as their contribution for 1927.

In the Native Reserves, notably in Kavirondo and Kikuyu, success has attended the bulk issues of " Flat White " maize for seed purposes and there is coming on the markets quantities of maize of this type grown by natives. It will be seen that the proportion of maize of native origin exported has gradually declined in relation to non-native maize. It should not be understood that the production of native-grown maize has decreased. On the contrary there is reason to believe that there is a much larger output, but to an increasing extent native-grown maize is used to supply a growing market for local consumption. Thus the larger proportion of maize grown on European holdings is released for export.

It will be recalled that the last Maize Conference passed a resolution recommending that the profits (if any) from grading be utilized towards meeting any losses incurred in the conditioning services or *vice versa*. Separate accounts have been kept for Grading and Conditioning Services and statements of balances are given in an Appendix V placed before you. The position is that as at June 30th, 1928, the Grading Account shows a credit balance of £2,566, while on the same date there is a debit balance against the Conditioning Account of £77, leaving a credit balance on the combined account of £2,489, but it has to be noted that no charge is raised for interest and depreciation on a capital expenditure of nearly £11,000 on the Maize Conditioning Plant, and it was an understanding that spread over a period of years these should be liquidated.

Among the matters which you will be asked to consider on the Agenda is one which has arisen from difficulties experienced by the Railway and Harbour Administration in the storage of maize in transit sheds pending shipment. I hope that Conference will find a solution alike acceptable to the Administration and to the industry, while maintaining the reliability and authenticity of the grading certificate, the reputation of which, I am glad to say, has remained unimpaired during the years that the Agricultural Products Export Ordinance has been in operation.

The deliberations of Maize Conferences and the work of the Maize Consulting Committee have proved to be of the greatest value in placing this service upon a sound basis.

May I add, with my personal knowledge, that the results so far achieved, and the absence of any reference during the last five years to the Appeal Board provided, are in no small measure due to the care and skill exercised by the Chief Grader with the support of the staff falling under him."

2 & 3. REPORT OF CHIEF GRADER & INSPECTOR.

The Chief Grader and Inspector, Mr. C. C. Sharp, then read the following report :—

ANNUAL REPORT OF THE CHIEF GRADER AND INSPECTOR FOR
THE PERIOD JULY, 1927—JUNE, 1928.

Maize Grading.

The table shown in Appendix I gives the quantities graded in each month together with their grades. The total of 504,392 bags is only 45 per cent. of the previous year's total, a reduction to be accounted for partly by the smallness of the crop available for export owing to bad climatic conditions, and partly by the diversion of a considerable part of the available maize to Uganda, where natives were experiencing a great shortage of foodstuffs of all kinds.

Of the total of 504,392 bags it is estimated that 70,000 bags or 14.8 per cent. were native grown.

Appendix II shows the average percentage of moisture contained in the rejected wet maize railed from different stations on the Kenya and Uganda Railway.

The native maize remains every bit as wet as heretofore. there still being no apparent attempt made to dry it before railing. The European-grown maize is, however, drier, for including the wet maize sent direct to the Conditioning Plant, the returns show that in the first three months of 1927, 7.7 per cent. of the maize inspected was rejected as wet, whereas only 6.2 per cent. was rejected during the corresponding period of 1928.

102,000 bags of maize were exported to ports on the East Coast without a certificate, the bulk of which was not inspected, though as usual advantage was taken of this local market to get rid of small lots of rejected maize.

Shipments in bulk amounting to 242,038 bags were made, consisting of 218,143 bags of Grade 2, and 23,895 bags of Grade 2 slightly weevily. Secondhand bags were used in considerable quantities for this purpose.

In cases where maize of a quality other than that intended for bulk shipment was found to be in secondhand bags, rebagging was usually avoided by shipping to local ports, only a few hundred bags being rebagged during the season for this reason.

This does not include 1,902 bags rebagged, and 1,739 bags reseeded by the Kenya and Uganda Railway.

Maize Conditioning Plant.

56,766 bags of maize were conditioned at the Maize Conditioning Plant, of which 49,984 were wet, and 6,782 weevily. Of the wet maize 1,713 bags were sent direct, and charged for at the lower rate.

Owing to the small quantity of wet and weevily maize no congestion, such as occurred in the previous year, was experienced, and shifts of not more than twelve hours per diem were run.

Appendix IV gives the financial statement for the year. As might be expected in such a lean year a loss in the running has been incurred amounting to Sh. 9,397/31.

Other Services.

As the revenue derived from Grading Fees other than those for maize is included in the same account, reference is made here to the grading and inspection of potatoes and beans.

Potatoes.

The Agricultural Produce Export Ordinance was applied on 1st July to potatoes in accordance with the Grading Rules published in the Gazette on the 22nd April. These Rules were amended in October, making provision for an additional grade, and some minor alteration in the Rules relating to packing. 28,863 cwts. were inspected. The majority of the potatoes exported have to be hand picked either at the rail head or at Kilindini, owing to the large proportion of mechanically injured tubers.

Beans.

Fifty-two certificates for 9,200 bags of beans were issued at the request of shippers.

Appendix III gives the financial statement of the Grading Services for the year. In spite of the small quantity of graded produce exported, a profit of Sh. 8,094/12 is shown.

After reading the report, the Chief Grader then explained the appendices thereto to the meeting.

MR. TYSON enquired if there was any objection to writing off interest and depreciation on the conditioning plant year by year and suggested that this be done.

COLONEL TUCKER suggested that this was a question of book-keeping and that the balance was not available in a separate account of the Treasury.

THE CHAIRMAN pointed out that it had been agreed that the grading and conditioning accounts be combined, in a resolution of the last Maize Conference, and for that reason a combined account was presented to this Conference.

COLONEL GRIFFITHS suggested that the method of accounting go on as before, but that the position be referred to the Hon. the Treasurer for record purposes and moved the following resolution :—

“ That the present position in respect of the accounts be reported to the Treasurer and that the opportune time for consideration of a reduction of grading fees will be when the capital cost of the Conditioning Plant has been wiped off.”

This was seconded by Mr. Tyson and carried unanimously.

COLONEL TUCKER then moved the adoption of the report and financial statements of the Chief Grader and Inspector and that an appreciation of Mr. Sharp's work and the confidence rested in him by all interests concerned be recorded. This was seconded by Mr. HAMILTON and carried unanimously.

MR. KAMROADDIN asked for information as to the activities of the Agricultural Department in connection with the issues of seed maize in native reserves and stated that he believed a proportion of this seed was sold directly and not used as seed.

THE CHAIRMAN read extracts from the Annual Report of the Department showing that the effect of such departmental issues had been a very large increase of export of Flat White maize from native reserves, such as fully justified the issue of such seed in spite of occasional abuses, which could hardly be avoided though they were controlled as far as possible.

4. CONSIDERATION OF SCHEDULE OF MAIZE GRADES.

Advisability of amending “ Flat White No. 1 ” by deleting “ 1 per cent.” and substituting “ 3 per cent.” in order to establish this as a commercial grade.

THE CHAIRMAN said that No. 1 grade was established really as a “ seed ” grade and that advantages might be gained if it were made to conform to a commercial grade. He reported conversations with interested parties in South Africa and Rhodesia and advised that any change made should have the approval of all countries in South and East Africa.

He submitted the subject for discussion and asked Conference to consider the effect which the alteration might have on the selling of Grade 2.

MR. SHELDON asked if South Africa or Rhodesia had taken any steps on these lines and was informed by the Chairman that they had not. He enquired what percentage of K 2 would go as K 1 under the proposed alteration.

MR. SHARP : A fair percentage.

MR. SHELDON : The effect on the K 2 grade should be considered in possibly reducing its value.

MR. HAMILTON did not see what benefit would accrue by alteration of grade.

MR. SHARP exhibited samples containing different percentages of " defective " grains and pointed out the difficulty of distinguishing between 3 per cent. and say 6 per cent.

MR. TYSON said the suggested action would make K 2 inferior and that it would depreciate the present value of K 2 and therefore it was unwise to make the alteration.

MR. HAMILTON moved and MR. SHELDON seconded " that no alteration be made " and this was carried unanimously.

5. DISCUSSION ON DRYING PLANT (K.F.A.).

COLONEL GRIFFITHS on behalf of the Kenya Farmers' Association stated that the Association had been consigning direct to the conditioning plant and the result was overloading of the plant. The best market was at the early period and maize if it were dried in this way could catch that market, and avoid congestion in the height of the season, and that had the plant been larger his Association would have consigned larger quantities direct.

THE CHAIRMAN pointed out that the conditioning plant was not established for this purpose and that first consideration had to be given to the treatment of " rejected maize " as agreed at the last Conference. He also read the record of the Maize Consulting Committee in this connection.

COLONEL GRIFFITHS intimated that it was not the intention of the Kenya Farmers' Association at present to proceed with the erection of a conditioning plant.

COLONEL TUCKER moved : " That this point be brought up before the Maize Consulting Committee for further consideration." MR. TYSON seconded and the resolution was passed unanimously.

6. APPEAL FROM GRADER'S DECISION.

Consideration of the provision of some form of appeal from the Grader's decision as to moisture content (K.F.A.).

COLONEL GRIFFITHS, representing the Kenya Farmers' Association, said that the directors of the Association had discussed the question and wished for the provision of some method by which the grader's return of wet maize might be checked.

MR. SHARP stated that he was always willing to re-test any consignment if required to do so, on payment of Sh. 5, as already arranged.

THE CHAIRMAN agreed that some form of check should be provided, if demanded by interested parties.

The opinion of the Conference was that greater publicity should be given to the fact that the grader would perform a check test if called upon to do so.

COLONEL TUCKER proposed: "That the Chief Grader circularise shippers pointing out that facilities existed for retesting maize on payment of the prescribed fee." MR. HAMILTON seconded and the resolution was carried unanimously.

7. LEGISLATION FOR CO-OPERATIVE SOCIETIES.

Greater measure for co-operation between maize farmers and co-operative societies, taking steps to secure this with the aid of legislation when advisable (Trans Nzoia Farmers' Association).

COLONEL PUDSEY in opening the discussion on behalf of the Association, asked that legislation to make the by-laws of co-operative societies legally binding be framed.

COLONEL GRIFFITHS mentioned that the point had been discussed at previous Conferences.

THE CHAIRMAN read extracts from the report of the Third Conference (1925) and suggested that the question was now before the country in another form in connection with the Land Bank Bill and that some clauses of that Bill might be inoperative until a Co-operative Societies Act was brought in. The number of societies at present concerned was small and the proper administration of such an Act would require the services of an officer experienced in co-operation.

COLONEL GRIFFITHS moved and COLONEL PUDSEY seconded: "That this Conference re-affirms the resolution passed on two previous occasions by the Maize Conference." The motion was carried unanimously.

The motion referred to and passed at the second and third Maize Conferences in 1924 and 1925 is as follows :—

"That in the considered opinion of this Conference, it is very desirable that legislation be introduced to legalise the by-laws of co-operative societies."

8. SHORT-TERM LOANS FROM LAND BANK.

As the majority of farmers are debarred from obtaining financial assistance from the Land Bank by reason of their indebtedness to existing banks, Government to give sympathetic consideration to the claims of co-operative societies for short-term loans from the Land Bank to assist their members who would otherwise receive no pecuniary assistance from its institution.

COLONEL PUDSEY, in opening the discussion, pointed out that funds from the Land Bank were proposed to be allocated, firstly to established farmers, secondly to would-be farmers, and thirdly to co-operative societies. In practice, however, many established farmers were under obligations to the banks which would debar them from obtaining short-term loans and they might best be served by a co-operative society. It was the custom for recommendation to the banks to be made following inspection whereupon the banks advanced short-term loans at 8 per cent. Short-term loans by co-operative societies assisted by the Land Bank would be cheaper, more easily arranged and better. He further stated that 25 per cent. of the Trans Nzoia Farmers were believed to have required such advances last season.

MR. TYSON drew attention to Clause 37 (ii) b of the Land Bank Bill as now proposed, viz. :—

"37. (ii) Advances to a co-operative agricultural company in the form of a cash credit account shall not, during any one year, exceed :—

(b) Where such advances are made for the purpose of enabling such company to finance its members in respect of farm produce delivered to it by them, sixty per centum. of the value of such produce as determined by the Central Board."

COLONEL PUDSEY believed that the four unofficial members who were on the Select Committee considering the Bill were not in favour of such advances to co-operative societies.

MR. TYSON suggested that crop advances were not the business of the Land Bank and that if they were so made all available funds would be swallowed up in this way at certain times to the detriment of the proper functions of the Bank which are longer term advances.

MAJOR GAITSKELL suggested the proper function of the Land Bank was to relieve the banks of long-term loans to farmers.

COLONEL PUDSEY moved :—

“ That in order to secure the greatest benefit from the Land Bank this Conference considers it essential that legislation governing the institution and control of co-operative societies be passed in order that these societies may secure loans from the Land Bank and in turn the members of these societies be in a position to secure advances from the society.”

COLONEL GRIFFITHS seconded and the resolution was carried unanimously.

COLONEL TUCKER commended the very broad-minded view taken by the Conference in passing such a resolution.

Further items of the Agenda of the Maize Conference discussed in conjunction with the Wheat Conference will be found in Part III.

PART II.

**REPORT OF THE PROCEEDINGS OF THE
FIRST WHEAT CONFERENCE.**

Held in the Library of the Department of Agriculture,
ON WEDNESDAY, 8TH AUGUST, 1928.

The following representatives attended the Conference :—

HON. ALEX HOLM, C.B.E., *Director of Agriculture*, Chairman.

HON. SIR CHRISTIAN FELLING, K.B.E., C.M.G., *General
Manager, Kenya and Uganda Railway.*

CAPTAIN H. SAYER	} <i>Kenya Farmers' Association.</i>
MAJOR F. DE V. JOYCE	...		
MAJOR E. P. H. PARDOE	...		
MR. R. HALL	...	...
MR. J. D. CHATER	...	...
COL. G. C. GRIFFITHS, C.M.G.			

MR. DAULET RAM	} <i>Indian Association.</i>
MR. RALLARAM AGGARWALL	

MAJOR C. GAITSKELL	} <i>Convention of Associations.</i>
MR. J. E. HARPER	

MR. A. M. CAMPBELL ... *Conference Lines.*

MR. R. J. SHELDON ... *Mombasa Chamber of Com-
merce.*

MR. G. A. TYSON	} <i>Nairobi Chamber of Com- merce.</i>
MR. H. B. HAMILTON	

In attendance.

MR. A. K. CONSTANTINE	...	<i>Milling interests.</i>
MR. C. C. T. SHARP	...	<i>Chief Grader and Inspector.</i>
MR. G. J. L. BURTON	...	<i>Plant Breeder.</i>
MR. D. L. BLUNT	...	<i>Secretary.</i>
MR. C. B. C. HANDLEY	...	

AGENDA.

1. Appointment of Chairman.
 2. Opening statement by Director of Agriculture.
 3. Consideration of the application of "Agricultural Produce Export Ordinance, 1921," to wheat.
 4. Proposals *re* grades and grading.
 5. Consideration of the adoption of a standard weight for wheat.
 6. Consideration of the freight on wheat and flour to coastal ports.
 7. Advisability of introducing legislation to regulate the sale of fertilisers and pest remedies.
 8. Statement by Plant Breeder on wheat breeding work.
 9. Statement by Mycologist *re* research work on rusts.
 10. Contribution by wheat industry to Plant Breeding Services.
 11. Appointment of "Wheat Consulting Committee."
 12. Any other business.
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Opening of Conference.

APPOINTMENT OF CHAIRMAN.

CAPTAIN SAYER proposed and MR. CAMPBELL seconded that the Director of Agriculture (HON. ALEX HOLM, C.B.E.), take the chair. The motion was put to the meeting by the Hon. the General Manager, Kenya and Uganda Railway, and carried unanimously. The Director of Agriculture after thanking the Conference opened the proceedings with the following address :—

“ The progress of the wheat industry, the important place which it occupies in the agricultural development of the Colony, and the success which has attended the holding of various other agricultural conferences, have, I hope, been ample justification for convening this the first Wheat Conference to be held in this Colony, and I am glad to have this opportunity of welcoming delegates representative of all interests engaged in the industry.

During past years the Department of Agriculture has been in the closest touch not only with growers but with marketing organisations, millers and bakers, shippers and oversea firms likely to be interested in Kenya wheat, and much has been done in the truest co-operative spirit for the promotion of the industry. I hope that as the result of this Conference a definite link with the Department which I represent may, as in the case of the maize industry, and other organisations, take shape.

Attempts to establish a wheat industry were made in the early years of settlement in this Colony, and a tribute is due to Lord Delamere for his valuable pioneering effort. More than fifteen years ago the need for breeding rust-resistant wheats was recognised and work was commenced by the Department of Agriculture. Unfortunately the Great War interrupted its progress and rendered it practically impossible to maintain continuity in the records of breeding work and track of hybrid wheats produced. When a fresh start was made by the appointment of a Plant Breeder in 1921, there was, however, available an accumulation of material upon which to begin work. I will not go further into this question as the Plant Breeder will address you on the subject.

In 1922 Government definitely adopted a policy of introducing heavy protective duties in order to encourage the industry and to secure its establishment. Its progress can be gauged from the Agricultural Census which was fortunately

commenced in 1920 just at the time when the need for such statistical information arose. The area of wheat under cultivation has steadily increased from 5,614 acres in 1920, to 65,000 acres as at July 31st, 1927.

While on individual farms and in individual fields good yields have been obtained, the average yield whether for the country or for districts is phenomenally low. That is due to several factors. On many farms there is insufficient preparation of the land for the crop, sowings are not uncommonly made too late in the season after other crops have received attention; the crop is grown in an area deficient in rainfall, game destroy the crop in unfenced areas and birds often take a heavy toll of the grain, some of which is again lost in harvesting operations being carried out too late. Again the wheat crop is not infrequently sown on the poorest of the land available and the farmer endeavours to console himself by pretending that 'it is good enough for wheat.' Lastly the heaviest reduction in yield is due in many instances to 'rust'. Happily that has to some extent been overcome and there is promise of the introduction of new varieties resistant to the rusts of the different areas.

Better farming, destruction of the bird pest which is becoming very serious and the breeding of rust resistant varieties are all pre-requisites to heavier yields. Indeed it is not seen how the crop can become firmly established at anything approaching world's market prices unless yields per acre are substantially increased. I will not repeat the remarks I made at the Maize Conference in regard to the importance of maintaining soil fertility except to say that they are of like application and consequence to the wheat-grower.

As in other countries, so in Kenya, the wheat farmer is faced with the relatively high capital cost of machinery and implement equipment necessary for the cultivation and the harvesting of the crop, and it is clear that it is economically unsound to incur an expenditure on machinery and implements not commensurate with crop returns. The smaller wheat-grower is faced with a difficulty of this kind and it can only be overcome by increasing the area up to an economic unit, or by common use being made of a travelling threshing machine.

During recent years a marked improvement has taken place in milling plant and the milling capacity of wheat mills has been substantially increased. A special return compiled by the Agricultural Department for the year ended November

30th, 1927, showed that the wheat mills were capable of milling 40.5 bags of wheat per hour, and that during that period 67,602 had been converted into flour with an average out-turn of 75 per cent. That high return is due to the production of 'atta' flour and meal, which represented 62 per cent. of the total out-turn.

Notwithstanding a large increase in production during the last two years in particular, it is remarkable that, according to the latest returns available, imports of wheat flour show no marked decline in quantity. There is undoubtedly a steady increase in consumption and the export of a quantity surplus to the requirements of wheat mills in the Colony has taken place during recent months, but in some respects the position is irreconcilable and some adjustment is indicated. Apart from the growing requirements of the non-native population there is opening up an opportunity to supply the needs of the African population which with its advance in the scale in civilisation will be prepared to use wheat flour as part of its diet, provided that it can be supplied at a reasonable price.

In this connection I might mention that some of the native tribes are taking an interest in wheat production, and the Agricultural Department has been encouraging the growth of the crop, particularly in the Kikuyu Province. With the reduction of the risk of the loss of the crop afforded through the raising of rust-resistant varieties it is seen that some parts of the native reserves are capable of producing fair crops of wheat. The effort has been directed not so much with the object of producing a revenue crop but in order to improve the diet of the natives and to increase its nutritional value.

The wheat industry has now reached a transitional stage and there is evidence that production is likely to increase and a quantity surplus to the Colony's requirements of locally grown wheat will be exported. It is not only the view of the Department of Agriculture but that of the growers and those engaged in the trade as well as buyers overseas that steps should be taken to apply the Agricultural Produce Export Ordinance to wheat.

Pending an opportunity for a closer examination of the question by this Conference, Rules governing the inspection of export wheat were promulgated in May last.

The draft of Rules governing the grading and inspection of wheat for export and a description of proposed grades have been circulated among delegates and one of the main objects

of this Conference will be to give consideration to these proposals. Other matters of importance to the industry will appear on the Agenda.

These and future joint with joint related activities and co-operation with Government will ensure an improved and efficient shipping service which will become securely established as one of the most important ways which bound us to the Colony."

It was then suggested by the Chairman that items 4 and 10 of the Agenda & the Main Conference be taken; this was agreed to.

Record of the discussion appears in Part III.

2. CONSIDERATION OF THE FREIGHT ON WHEAT AND WHEAT FLOUR TO COASTAL PORTS

MR. COCHRANE pointed out that freight on wheat and wheat flour appeared to be very high in comparison with long distance rates.

MR. COCHRANE pointed out that from Mombasa to Durban, port to port charges amounted to £6. 10 per ton, whereas the railway rate, usually a more costly item, on the 400 odd miles from Ngara to the coast was only £6. 17. 6d.

MR. COCHRANE pointed out that the rates were lowered some ten months previously.

CARRAN SAUND asked what was the rate to Durban.

MR. COCHRANE: Shipping charges are £6. 10 per ton.

CARRAN SAUND remarked that this appeared to be disproportionate to the maize rates to European ports.

THE CHAIRMAN mentioned that he had been at a meeting of the Council of the Chamber of Commerce recently, and that he was informed by the representative of the Conference Lines that their policy was to offer the lowest freight possible to encourage traffic between South and East African ports.

MR. COCHRANE: That was why they had been reduced last year at his instance. Freight from Durban are much higher. It appears that large freight would be returned. He gave particulars of charges which has to be met by shipping companies showing that the balance available on the freight was very small, and he pointed out that freight was disproportionately heavy on short hauls, and that shippers had to send cargoes.

The Chairman asked if small cases could be loaded for large cargoes.

MR. CAMPBELL: Certainly.

The Chairman expressed the thanks of Conference to Mr. CAMPBELL for his explanation.

3. CONSIDERATION OF THE APPLICATION OF AGRICULTURAL PRODUCE EXPORT ORDINANCE, 1921, TO WHEAT.

General Orders in proposed are those from the Secretary.

"That wheat do come under the operation of the Agricultural Produce Export Ordinance, 1921," and the resolution was carried unanimously.

4. PROPOSALS RE GRADES AND GRADING.

The Chairman explained that the Rules had been drafted for purposes of discussion after enquiry by the Department of Agriculture and with particular reference to the wheat exported to South Africa and elsewhere.

Mr. SHARP explained the Rules as drafted (Appendix VI).

Mr. CONSTANTINE, in referring to the principle adopted in the rules of exporting named varieties explained that in large producing countries such as Canada, similar climatic conditions over large areas produce wheat of uniform character from the miller's point of view and there would be no need to specify named grade even if different varieties. In this Colony it was not so. He considered that the country should ship named varieties moderately pure.

Mr. HALL asked whether named varieties in this Colony were consistent in character, instancing "Pavator," which appears to be different when grown under different conditions.

Mr. CONSTANTINE was of the opinion that the character of the wheat from a miller's point of view did not vary greatly, but stated that mills usually receive different consignments of one variety. Washing before milling brings all the wheat to the same consistency as regards moisture content.

Major PARDOE pointed out that in Australia red wheats were not encouraged, but that different varieties of white wheats went out under one grade.

MR. CONSTANTINE pointed out that such wheats were produced in areas of similar conditions and were marketed from different ports, each port shipping a distinct type.

COLONEL GRIFFITHS said that those wheats were pooled. Samples of the pooled wheat were sent out and in effect one port shipped one variety though it might be a mixture.

MR. HAMILTON, in referring to varieties in different parcels of "Equator," said that repeat orders from South Africa had brought no complaints of difference in milling quality.

MR. TYSON asked if grading up-country was a possibility, having reference to the congestion which had occurred at the port, and proposed that the words "at the Coast" in Rule 3 be deleted.

MAJOR JOYCE seconded.

THE CHAIRMAN said he could not recommend such alteration to Government. It should be brought up when up-country grading is seriously considered, and he pointed out that that would involve other alterations to the Rules.

MAJOR GAITSKELL pointed out that the congestion at the port had come about since the Maize Rules were drafted and that conditions were now different. The motion was carried by ten votes to three.

CAPTAIN SAYER asked when it was proposed that the Rules be made effective, and recommended their early application.

THE CHAIRMAN said that he anticipated that they would be published at an early date.

Rule 5.

MR. CONSTANTINE pointed out that the standards required were high.

MR. SHARP gave it as his opinion that under the proposed Rules 5 per cent. of the exports to date would have been refused an Exportation Certificate.

COLONEL GRIFFITHS AND CAPTAIN SAYER agreed that this was a dangerously large percentage and suggested an under-grade or sample grade be introduced.

MAJOR PARDOE disagreed with this view.

The point was left for further discussion in connection with the schedule of grades.

Rule 10.

CAPTAIN SAYER asked how sampling would be done and was of the opinion that the sampler used for maize would not correctly show the percentage of straw in the bag.

MR. SHARP explained that the sampler would be used, but he could open bags if considered necessary, but this would add to the cost.

Rule 12.

MR. CONSTANTINE suggested 13 per cent. moisture might not be high enough. He had found that even some months after harvest in a dry year the average run of wheat had a moisture content of 12.4 to 12.8 per cent. and he thought that in a normal year it would exceed 13 per cent. He suggested that the figure be 13.5 per cent.

THE CHAIRMAN pointed out that what was aimed at was the arrival of the wheat in good condition. Wheat which heated at all became musty and this had to be avoided.

CAPTAIN SAYER asked if it could not be conditioned.

MR. CONSTANTINE thought that this should be used as little as possible, owing to the effect on the quality of the wheat.

MR. HAMILTON remarked that if 14 per cent. moisture were permitted the producer would not get such a good price. The wheat would not carry to Cape Town, though it might to Durban. 13 per cent. was, he thought, the maximum.

CAPTAIN SAYER proposed that 13 per cent. stand, and MAJOR PARDOE seconded.

The resolution was carried by 14 votes to 1.

MR. BURTON then gave the meeting a short resumé of the work of the Plant Breeding Station.

In two interesting addresses, Mr. Burton gave a short resumé of the work he had done in the past and of the stage that had now been reached towards the improvement of the types of wheat and maize grown in the Colony. With regard to wheat he made the point that no Wheat Conference could sit and discuss the questions then under discussion unless the services of a Plant Breeder had been employed in the Colony, because no wheats in any other part of the world appeared to be economic propositions in Kenya, chiefly owing to their susceptibility to the rusts of this country and therefore entirely new varieties had specially to be bred.

He regarded our two varieties, namely "Equator" and "Kenya Governor," merely as very useful stop-gaps which would carry the wheat industry through until better varieties had been bred. He was happy to inform Conference that during last year and this year he had issued in small quantities four new varieties, one of which in a drought had yielded nearly four times more highly than "Kenya Governor." In a general way he had still better hopes of another, at present numbered B.286. This was highly resistant to Stem Rust, so resistant in fact that he felt prepared to guarantee it against destruction by that rust, and it also appeared, though only after one trial, to be immune to Yellow Rust. These two qualities would enable it to be grown all over the country. It had the further qualities of strong straw and close chaff. These qualities, including rust resistance, were lacking in degree in "Kenya Governor" and "Equator," and though the ears of B. 286 were not so high-yielding as those of "Kenya Governor" and "Equator," he expected that the other good qualities would overcome this disability.

In addition he had some fifty more new varieties under trial at the Scott Agricultural Laboratories and a large number of wheats still in the hybrid stage. Owing to the restriction as to choice of original parents for his new wheats they, although they had extraordinarily high-yielding ears, were mostly cursed with long and weak straw. These qualities were as inimical to high yield as susceptibility to rust. He held out as a certain hope, however, that in another ten years he would produce in fair quantity wheats which combined the qualities of resistance to stem and yellow rust, strong short straw and high-yielding ears. The production of such wheats should make wheat farming in this Colony a highly profitable undertaking.

At the Plant Breeding Station at Njoro, he was similarly growing some two hundred new varieties of wheat, in addition to a large number of wheats still in the hybrid stage and all resistant both to stem and yellow rust. He stressed the point that there was no essential difference between the wheat-breeding work at Njoro now and that which had been conducted in the past on land belonging to and with the great assistance of Messrs. Sewall and Wright, and later Lord Egerton of Tatton. A change had to be made sooner or later as with the gradual increase in number and amount of wheats, land, staff and labour had to be increased. The essential difference between the past and present was that it was now possible for maize breeding to be undertaken and for the carrying out of some essential experiments on maize and wheat.

In addition to the Plant Breeding Stations at Njoro and the Scott Agricultural Laboratories, there were through the courtesy of two gentlemen, two more, one at Mau Summit on Major Drought's farm, and another near Soy on Sir Neville Pearson's farm. The object of the one at Mau Summit was to produce wheats resistant mainly to Yellow Rust and suitable for the higher and colder areas of the Colony and was in the charge particularly of the Assistant Plant Breeder. The object of the one at Soy was to produce wheats suitable for the large area comprising the Plateau and Trans Nzoia, and was in the charge particularly of Mr. Checksfield, employed by Sir Neville Pearson. The work at the Scott Agricultural Laboratories was particularly in charge of the Assistant in Plant Breeding. Furthermore, trials of new varieties are frequently carried out on farms throughout the country.

No attempt was being made to import maize varieties, as we already had a very mixed and acclimatised type of maize growing in the country, from which selections were being made. The fact is that if 8,000 plants of maize are grown to the acre, and 12,000 plants is probably the optimum number where rainfall is sufficient, and each plant gives only half-a-pound of seed, the yield would be 20 bags to the acre. Average yields, however, were not even half that. Two main reasons being that often there were not even 8,000 plants to the acre and many plants gave only wretched cobs. The object of the two kinds of maize-breeding he had already begun was to eliminate these poor cobs, a process which would take time, but he felt confident of success. He was also aiming at improving the general type of maize in the direction of its yielding powers. Out of the many points which required improvement he particularly stressed the depth of grain. In this direction he considered that Mr. A. J. Simpson, of Olabanaita, had already accomplished excellent work.

In his opinion large areas of land in the Colony could grow excellent crops of wheat and maize granted that good varieties of these crops were available and that the soil was properly treated. In this latter direction he had begun experiments at Njoro.

A large and comprehensive rotation experiment with maize, wheat, barley and green manures had been laid down at Njoro. On soils where nodules containing symbiotic bacteria did not flourish in the roots of legumes he advocated sunflowers broadcasted at about 45 lbs. to the acre as a highly efficient green manure.

His fertiliser experiments with different types of phosphatic manures applied at varying rates per acre had already given very appreciable results with wheat on soil lacking in phosphates. Results were not so far apparent with maize. In most cases the cost of phosphates was under Sh. 10 per acre. Superphosphate appeared to give the quickest results, on account of its solubility. He warned farmers, however, that continued use of phosphates, though increasing yields, would the more rapidly exhaust other plant foods in the soil and advised the occasional addition of humus to conserve soil fertility and texture.

MR. McDONALD explained the work being done in the isolating of different biologic forms of rusts.

He mentioned the three species of rust found on wheat in Kenya, and explained that the work in progress concerned one only of these, namely Black Stem Rust, due to *Puccinia graminis*.

He showed how wheats which proved resistant to rust in one district might prove susceptible when grown in another, and explained the work of American scientists, which led to the discovery that this was due, not to any breakdown in the rust resistance of the wheat, but to the fact that the strain of rust itself was slightly different, these differences being so small as not to justify their classification into different species, and in fact to render them almost indistinguishable except by their action on different varieties of wheat.

He stated that for some time past work on stem rust had been in progress in Kenya, with two main objects, firstly to discover whether more than one biologic form of rust occurred in this country, and secondly to assist the Plant Breeder to decide at an early stage whether new wheat selections were likely to prove rust resistant in the districts for which they were eventually intended.

He explained the method used, which has been the inoculation of a large range of wheat varieties with stem rust obtained from different districts, the wheat being grown in special cages. Rust from Nairobi, Njoro and Molo districts has been tested, and rusts from Machakos and the Nanyuki and North Kenya districts are undergoing tests at present.

Work already done, he said, indicated that Njoro and Molo rusts were identical, but that they differed in their action on certain wheats from Nairobi rust. This indicated that rusts from Nairobi and Njoro were different biologic forms, and

experiments were designed and successfully carried out in order to confirm this. In further support of this, measurements had been taken of some 1,300 spores of the two rusts, and when the figures so obtained had been fully analysed, it was probable that a slight difference in the length of the spores would be shown.

In explaining the significance of these results, the Mycologist cited the case of "Kenya Governor" wheat, which had been found to be highly resistant to Njoro rust and moderately susceptible to that of Nairobi. The testing of new selections for the Plant Breeder did not permit of description, but much work had been carried out and useful information obtained.

In conclusion he stated that certain new wheats, while still in the experimental stage, had exhibited a high degree of resistance to both the biologic forms of rust which had been mentioned.

Delegates thereupon proceeded to the Scott Agricultural Laboratories, where they were shown the work in progress there. The Plant Breeding in progress was explained by Mr. Burton, and other activities by Mr. Lyne Watt.

Conference reassembled at 10.30 a.m. on Thursday, the 9th instant, when consideration of the Rules for the grading of wheat was continued.

MR. SHARP exhibited samples of wheat of varying bushel weights from 57 to 63 lbs. per bushel.

Rule 17. Slightly weevily wheat.

MR. SHARP explained that wheat should not be raised to a temperature higher than 120 degrees C. and that at least 140 degrees C. was necessary to kill weevil eggs. Treatment in the Conditioning Plant therefore of weevily wheat was not practicable.

It was agreed to alter the Rule to read "Slightly weevily wheat shall be stored separately from other wheat."

Rule 18. Charges to be made.

MR. SHARP pointed out that wheat would probably take nearly twice as long to grade as maize.

THE CHAIRMAN thought that the work might be done for 10 cents a bag.

The Conference agreed to 10 cents per bag being charged irrespective of the weight of bag.

Schedule of Grades.

Grades K1, K2 and K3 were agreed to as suggested, provided that the wording be altered to make it clear that 90 per cent. be the named variety and not more than 5 per cent. be durum wheat. It was agreed to strike out the word "shrivelled" in Rule 12, and to insert a clause as in the Maize Rules, making it possible to export a wheat below these grades on an inspection certificate only.

The bushel weights of K1.D, K2.D, and K3.D to be raised to the same as in the case of K1, K2, and K3.

5. WEIGHT OF BAGS.

Consideration of the adoption of a standard weight for wheat.

COLONEL GRIFFITHS suggested that the weight of bags for export of wheat be standardised.

MR. SHARP stated that Grader could not weigh bags, and Railway would not since no block-stacking was proposed.

MR. HAMILTON remarked that the South African market all demanded 203 lbs. gross weight bags.

COLONEL GRIFFITHS moved that the Conference recommends to all shippers that a standard weight of 200 lbs. nett be recommended for the export of wheat.

MR. HAMILTON seconded and the motion was carried unanimously.

This closed the proceedings of the Wheat Conference.

Items 7, 10 and 11 on the Agenda were discussed in conjunction with the Maize Conference and report of these discussions appears in Part III.

PART III.

REPORT OF THE PROCEEDINGS OF MAIZE AND WHEAT CONFERENCES IN COMBINED SESSION.

10. MAIZE CONFERENCE.

Free Storage Period : Consideration of the question of the reduction of the free storage period on maize.

THE HON. GENERAL MANAGER, Kenya and Uganda Railway was asked for a statement of the position.

He stated that the Port Advisory Board had recommended that the free storage period be reduced to 7 days. There had been congestion at the Port at the time of the greatest export of maize, leading to delay, damage, and loss to the country in general. Very large sums had been spent on deep-water berths and sheds at the Port and these were congested owing to the long free storage period of 21 days. This was bad; the sheds were provided for transit and not for storage, and it was necessary to make the traffic move more rapidly.

The maize rate of 1/- per bag was a very low one, and handling at the Coast greatly reduced the balance available to pay for haulage. The maize rate had been the subject of much criticism, and other interests took exception to the carriage of maize at what they contended was a low, non-paying rate.

For his part, he frankly and emphatically stood for the retention of this rate so long as it appeared necessary; it had done more, he thought, than anything else to develop Kenya, to build up a sound railway administration, and thereby to enable money to be secured for further railway extensions, but he could not defend a long free storage period for exports. During the past season the quantity exported had been comparatively smaller, but at one period one-third of the total output for the year had been in store at the Coast. This was unjustifiable, and must be reduced. Each season there had been occasional shortages of trucks during the "peak" periods, but more rolling stock had been purchased, and there was no reason why such shortages should occur in the future. The individual forwarding produce from up-country could not know what the position at the Port was. The working of the Port could not be made subservient to the difficulties encountered by the Agricultural Department in carrying out grading at the Port; in South Africa grading was carried out up the line when necessary. The time had come when storage of maize in private godowns outside the Port area must be permitted. In other countries, such godowns were licensed and treated as bonded warehouses under control. Shipping companies would be glad to have quicker movement at the Port, and grading must be quick enough not to cause delay in the passage of the produce from truck to ship. A reduction of the free storage period was absolutely inevitable.

THE CHAIRMAN pointed out that the grading service was carried out expeditiously: that the staff could grade at the rate of 10,000 to 15,000 bags per diem, and that that quantity was greater than the rate at which the Railway were able to deliver.

COLONEL GRIFFITHS asked whether the free storage period commenced with the arrival of the truck in the Port area.

HON. GENERAL MANAGER : Yes, and the maize is unloaded at once. The movement of trucks to the Port and back is quicker here than in any other country. They cannot be held up at the Port as there is no marshalling yard.

MR. TYSON appreciated the difficulties, and asked in what way the shorter period would ease the position from the Railway's point of view. It penalised shippers if ships are not there ready to take cargo.

HON. GENERAL MANAGER : Experience in other countries showed that the way to make cargo move was to penalise it if it did not. Shipping arrangements were not well made at present, and the agents had no incentive to improve them, because there was no penalty for not doing so. It was impossible for any port to work properly if the transit sheds were blocked with cargo.

COLONEL GRIFFITHS asked what had been the sums collected for storage charges.

HON. GENERAL MANAGER : Very small.

COLONEL GRIFFITHS remarked that the accumulations to which the General Manager referred must have been of 21 days' deliveries only.

HON. GENERAL MANAGER : The accumulation was due to shippers not troubling to secure cargo space. If the Port became congested again it would be necessary to refuse to load up-country.

COLONEL TUCKER asked for the Agricultural Department's point of view in order that the Conference might have the complete picture.

MR. SHARP : Maize was graded within 24 hours or in extreme cases 48 hours, and within 14 days of shipment. He had found it was generally shipped in a shorter time than this. Rejected maize must be moved within 4 days. He did not consider grading in private godowns could be justified; grade marks were not under supervision and bags could be refilled. Even under existing conditions, such things had occurred.

HON. GENERAL MANAGER stated that in South Africa grading was done up the line.

MR. CAMPBELL agreed that this was so.

HON. GENERAL MANAGER stated that machinery to control such grading was necessary, but could be devised. The Railway would prefer that all exports were consigned to the Port, but could not insist on the point.

MR. CAMPBELL said that some years ago he was organising the export of maize in South Africa. Export was mainly by private dealers on contract. He recorded each month the maize to be shipped the following month, and notified the railway 30 days before shipment, when it was required, and it was forwarded to suit the sailings of the ships. He consulted the railways, told them the quantities to be moved, and other maize was not accepted by the railway at that time. The scheme worked well, but merchants occasionally had difficulty in completing the contracts. In this country the export was in fewer hands, and such organisation would be correspondingly easier. The facilities in the way of documents were simpler in South Africa for shippers than in this Colony. Here the completion of shipping documents might hold up a consignment 24 hours. In Durban, the shipping order went out at once, and documents were completed while the ship was being loaded. The long free storage period had undoubtedly caused congestion last year, and 21 days' free storage could not be considered a business proposition.

HON. GENERAL MANAGER stated that advices were never received of the ship by which any particular parcel of maize was to be lifted. This applied to cotton, maize and all other export products, but was naturally a greater disadvantage in the case of maize.

MR. CAMPBELL emphasised the point that the transit sheds were built for a special purpose, and that purpose was not storage.

COLONEL GRIFFITHS made the point that a ship might be two or three days late, and asked on whom the loss so occasioned would fall.

MR. CAMPBELL said that this was the shipper's risk, but actually ships were very punctual.

THE CHAIRMAN asked whether if the free storage period were reduced the Railway would guarantee delivery at the Port in time to enable ships to be loaded.

HON. GENERAL MANAGER stated that in South Africa not a bag of export maize moved except for shipment by a particular ship, and that no railway in the world accepted responsibility for delay.

MR. CONSTANTINE gave an instance where part of a consignment would have missed the ship it was intended for had not the ship been two days late. He considered that the Department responsible for the delay should pay in such a case.

HON. GENERAL MANAGER reiterated that it was not possible for the Railway to accept responsibility for delay.

THE CHAIRMAN remarked that the quantity to be exported during the next season might be double that of last season when congestion occurred. The Agricultural Department must stand for the authenticity and reliability of the grader's certificate, but 10,000 to 15,000 bags can be graded per day, and only once since the beginning of grading operations had there been any delay and that was due to congestion created through the financial difficulties of certain firms. The Department was not primarily concerned with the question of movement of maize, but with grading and that could not be undertaken in private godowns except under rigid control. The grading did not hold up maize at the port for a period of more than 24 hours as a rule, and exceptionally not more than 48 hours.

COLONEL GRIFFITHS remarked that maize more than 14 days at the Coast must be regraded.

MR. SHARP : May be regraded.

COLONEL GRIFFITHS : Is this often done?

MR. SHARP : No.

COLONEL GRIFFITHS : This would indicate that maize was seldom held up over 14 days. He remarked further that the truck might be held up for 2 days, grading might take 2 days, and the ship be 3 days late; total, 7 days, which was the whole free period allowed.

HON. GENERAL MANAGER pointed out that maize paid the lowest rate of any commodity, and so was entitled to less consideration in the matter of free storage than any other commodity. The least that could be done in return for this concession was to move it quickly.

THE CHAIRMAN thought that there were four questions involved :—

1. The period of free storage.
2. Grading in private godowns.
3. The control of traffic to the Port.
4. The more expeditious handling of shipping documents.

MR. TYSON suggested that sheds might be erected at centres up country for grading purposes; if the Railway were to erect stores would not this facilitate movement?

HON. GENERAL MANAGER replied that people would not pay for such a service, but they could erect private sheds as was occasionally done. It was not the policy of the Railway to provide such storage facilities for export traffic.

MR. CAMPBELL asked if grading in private godowns in the Port area under control could not be undertaken.

THE CHAIRMAN : Yes, if the control is sufficient.

HON. GENERAL MANAGER remarked that all countries in the world graded in private godowns, and the same system would have to come to this country.

MR. CAMPBELL pointed out that the maize was trucked straight to the ship in South Africa.

THE CHAIRMAN remarked that the up-country grading carried out in South Africa in 1918-19 was primarily to assist up-country buyers and sellers, and not for export. The system was reported to have been found unsatisfactory.

MAJOR JOYCE suggested that a resolution be adopted leaving this question in the hands of the Agricultural and Railway Departments.

THE CHAIRMAN stated that he had enquired into the position recently in Rhodesia, and was informed that up-country grading would not be done there if they had control of the port of Beira, and under existing conditions grading had to be done twice and two grading fees paid.

HON. GENERAL MANAGER stated that at one time there were storage sheds, 20 miles outside of the port of Capetown, where grading of export produce was carried out.

COLONEL TUCKER suggested that the Hon. General Manager wished for a sympathetic resolution, but the majority of the Conference appeared to be against reduction to 7 days, and enquired whether a compromise of 14 days would be acceptable.

HON. GENERAL MANAGER said the Port Authority were against 14 days, and the period must be further reduced; if such a resolution were forwarded it would not be seriously considered.

COLONEL GRIFFITHS suggested 14 days might be the first step.

HON. GENERAL MANAGER remarked that it was proposed to reduce the free storage period for imports from 6 to 4 days, but that if a resolution suggesting 10 days for all exports was passed he would endeavour to secure its acceptance.

MR. SHELDON asked what was the average period of free storage of maize.

COLONEL GRIFFITHS asked how many ships per month called at Mombasa bound for North European ports.

MR. CAMPBELL said that the minimum was three, or possibly four, but that certain lines had offered to put more in the service, and all would do so if the necessity arose. It was, however, essential to know the shippers' requirements.

COLONEL GRIFFITHS suggested all the three or four might sail at about the same time.

MR. CAMPBELL said he thought that providing there was co-operation between the Kenya Farmers' Association, the Railway and shippers, maize could be shipped within seven days. Shipping companies would assist.

COLONEL GRIFFITHS remarked that this Conference was the only body on which the producers could express their opinions. There was no representative of the producers on the Port Advisory Committee.

COLONEL PUDSEY thought ten days insufficient.

MR. KAMROADDIN suggested that speculators who used the transit sheds as stores pending the sale of maize should be penalised.

MR. SHELDON proposed that :—

“ This Conference admits the necessity for a reduction of the period of free storage in Port transit sheds from 21 days to 12 days, but considers that a corollary of such reduction should be increased grading facilities if necessary and a speeding up of the formalities at the Port in connection with shipment documents.”

The resolution was seconded by Colonel Tucker and carried *nem. con.*

WHEAT, 7 ; MAIZE, 9.

Sale of fertilisers and pest remedies : Advisability of introducing legislation to regulate the sale of fertilisers and pest remedies.

THE CHAIRMAN outlined the position and stated that the cost of administering such an act would be considerable, probably £1,200 to £1,500 per annum. The value of fertilisers now being imported annually was about £30,000 to £35,000 and that the cost of the administration of an Ordinance completely was quite disproportionate to the present volume of the trade, and he asked Conference to consider whether a middle course such as had been suggested by the Coffee Planters' Union was advisable.

A memorandum by the Agricultural Chemist was then read.

Mr. Beckley's views were as follows :—

He agreed with the Committee of the Coffee Planters' Union that an ordinance to regulate the sale of fertilisers and pest remedies is desirable, but was of the opinion that the cost of fully administering such an act would be very considerable.

The Committee of the Coffee Planters' Union suggested that the desired protection might be afforded by prohibiting the import of fertilisers without a certified statement of analysis, but he considered that in most cases this is being done at present, but that it was the ultimate purchasers and not the importers who needed the protection.

He suggested that all fertilisers and pest remedies be registered and that check analyses be made from time to time to ensure the standard of quality being maintained. Each consignment would have to be imported under a certified statement of analysis to avoid having to analyse each one.

He thought that guanos should not come under the accepted class, as they should be classed as concentrated manures.

The object of the ordinance was to prevent the sale of "secret" remedies at a high price, but it could only be applied to materials intended for agricultural or horticultural use.

MR. HAMILTON suggested that importation might be prohibited except where an analysis was provided on the invoices. It would then be up to the buyer to protect himself.

MR. TYSON suggested the possibility of licensing dealers.

MR. CHATER asked if merchants gave no guarantee admitting liability.

MR. SHILLON said that his firm were given an analysis with each shipment, and would be prepared to give a copy of the manufacturer's analysis to buyers.

MR. HALL asked if the principals would not give a guarantee.

MR. BUCKLEY explained that the value of such a guarantee would be practically nothing legally.

THE CHAIRMAN asked if buyers were in fact suffering under any disability through lack of protection.

CAPTAIN SAYER and MAJOR GAITSKELL did not consider they were.

MR. HALL suggested the Agricultural Department might take occasional analyses of the more popular fertilisers and pest remedies, and publish the results, and the Chairman pointed out that this could not be done in the absence of legislation.

CAPTAIN SAYER proposed :—

"That in the opinion of this Conference no legislation is at present required, but it is recommended that a wide publicity be given to the fact that analyses of fertilisers can be and are made by the Agricultural Chemist.

"Further, this Conference recommends that the charges for such analyses be reduced to the absolute minimum."

Carried *nem. con.*

MAIZE, 13; WHEAT, 11.

Appointment of Maize Consulting Committee; appointment of Wheat Consulting Committee.

THE CHAIRMAN suggested for consideration that one joint committee serve for both interests.

COLONEL GRIFFITHS moved :—

“ That there be a joint consulting committee for maize and wheat.”

MR. TYSON seconded, and the resolution was carried unanimously.

The following constitution was suggested :—

Director of Agriculture, as Chairman.

One member nominated by General Manager, Kenya and Uganda Railway.

H.M. Trades Commissioner, or his Deputy.

Two members nominated by the Associated Chambers of Commerce.

Three members nominated by the Kenya Farmers' Association, representative of both maize and wheat interests.

MR. RALLARAM AGGARWALL asked for a milling representative on the committee.

THE CHAIRMAN asked if there was any organisation of millers who could appoint a representative, and pointed out that the committee was primarily concerned with export questions. Milling questions seldom would arise, and if they did the advice of millers could be sought.

MR. CONSTANTINE agreed with this view.

After further discussion, COLONEL GRIFFITHS proposed :—

“ That a representative nominated by the Indian Association be added to represent both shipping and milling interests.”

MR. RALLARAM AGGARWALL seconded, and the motion was carried *nem. con.*

WHEAT, 10.

Contribution by Wheat Industry to Plant Breeding Services.

THE CHAIRMAN gave the Conference a résumé of correspondence which had passed between the Kenya Farmers' Association, the Wheat Growers' Association, and the Agricul-

tural Department and Government on the voluntary cesses on maize and wheat understood to have been promised for the partial provision of extended plant breeding services.

MR. HAMILTON expressed his disagreement with the principle involved. Such services should be provided by the community since all were affected by the prosperity of the industry and not by sections only.

COLONEL TUCKER concurred with this view. He pointed out that the committee of management proposed had not been formed, and that a large proportion of the Plant Breeder's time was occupied with wheat breeding. The Kenya Farmers' Association, as representing the maize growers, had bound themselves to a voluntary cess for five years and had paid up for 1927. The proposed reduction of the free storage period at the Port was estimated to cost the maize growers about £1,000 per annum, and he suggested that it would be an act of grace on the part of Government to provide a complete free service.

COLONEL GRIFFITHS pointed out that the cess was inequitable as it fell only on members of the Kenya Farmers' Association, while other maize growers did not pay.

THE CHAIRMAN pointed out that there were many precedents for such cesses in other countries, and that had these funds not been promised the sanction of Government and the Secretary of State to the increased expenditure on those services would not have been so easily secured.

MR. HAMILTON proposed :—

“ That from henceforth all expenses incurred in experimental and research work on maize and wheat be met directly from Government funds.”

MR. TYSON seconded.

COLONEL PUDSEY suggested a round table conference between farmers, the Director of Agriculture and His Excellency the Governor on the subject of the voluntary cess.

COLONEL TUCKER suggested the proper course would be for the matter to be brought up in connection with the Estimates.

MAJOR PARDOE emphasised that the wheat growers had never withdrawn or gone back on the promise. Their promise of a contribution was conditional on the cess being collected from the whole industry, and they stood by that.

MAJOR JOYCE stated that before he would vote for the motion he wished it to be clearly understood that he thought that promises had been made and that they should be fulfilled. It should be made clear that growers did not intend to renew the contributions and implied that growers would appreciate release by Government from the promises.

The resolution was put to the vote and carried *nem. con.*

MAIZE, 14; WHEAT, 12.

Any other business.

1.—MR. CAMPBELL read to the Conference a letter he had received suggesting that a four-lugged bag was easier to handle and would, if employed, expedite work at the Port. Such a bag was extensively used on the West Coast.

MR. SHARP pointed out that tightly packed bags were a source of loss in that they frequently burst, and disapproved of anything which would tend to tighter packing.

THE CHAIRMAN suggested that the Kenya Farmers' Association might experiment with such packing and the meeting agreed to leave the matter in Colonel Griffiths' hands to secure further information.

2.—MR. TYSON, reverting to the subject of the reduction of the free storage period, said it was evident that the bulk of exports and imports would in future have to pay for storage at the Coast, and asked if there were any technical difficulties in grading up-country. Could grading not be done at Nakuru and Eldoret? If it were shown that the extra handling necessary in grading at Mombasa were responsible for delay at the Port there would undoubtedly be a call for up-country grading. Possibly the Railway might undertake this grading.

THE CHAIRMAN pointed out that there were several reasons unfavourable to up-country grading at present as discussed and agreed at previous conferences, *viz.* :—

1. The provision of the necessary storage facilities.
2. The question of control after grading.
3. The extra cost entailed.
4. The period elapsing between grading and shipping might allow of the development of weevils, necessitating reinspection at the coast and corresponding extra expense.

In South Africa there were, he said, country elevators, but even so a check at the coast was necessary. Conditions in this country were not identical with those in South Africa. There were greater risks, *e.g.*, weevils developed rapidly at certain seasons and maize declared sound up-country might not be in that condition on arrival at the coast.

MR. TYSON did not wish to press the case.

3.—COLONEL GRIFFITHS suggested that legislation should be introduced making it a simple and inexpensive matter to give a lien on a standing crop. He believed that such legislation had been considered previously and dropped. A simple method was in force in New Zealand. Forms of Lien and Registration Forms were procurable at any stationer's shop, and an agreement could be legally drawn up cheaply and expeditiously.

MR. TYSON suggested that what was required was the possibility of hypothecation of crop irrespective of any mortgage on the land. He was in favour of such legislation. In practice he said an agreement over a 1/- stamp was used for such purpose and almost invariably honoured though it was not legally enforceable.

COLONEL GRIFFITHS proposed :—

“ That Government be asked to introduce legislation to enable farmers to give a simple binding security over the crops when they desire to raise loans thereon.”

MR. HAMILTON seconded, and the resolution was carried unanimously.

4.—MR. HALL suggested that all farmers' associations be asked to nominate representatives to future conferences, and that the matter be not left in the hands of the Kenya Farmers' Association. He made no complaint, but considered this would be a better principle.

COLONEL GRIFFITHS pointed out that the representatives of the Convention of Associations represented the smaller associations.

THE CHAIRMAN said that in future the constitution of these conferences might be widened and their scope extended with advantage, and suggested the matter be brought under review by the Consulting Committee.

CAPTAIN SAYER proposed :—

“ That the method of representation on future Maize and Wheat Conferences be considered from time to time by the joint Consulting Committee.”

MR. SHELDON seconded, and the motion was carried unanimously.

COLONEL GRIFFITHS, in proposing a vote of thanks to the Chairman, said that such conferences in which producers, traders and shippers met and discussed the problems of the industry were most helpful and beneficial in their results. He paid a tribute to the tact and helpfulness of the Chairman.

MR. TYSON, in seconding, appreciated the useful work that had been done at the present conference.

The resolution was carried with acclamation.

THE CHAIRMAN, in returning thanks, said that Government and the Agricultural Department welcomed the opportunities afforded by such conferences of discussing the problems and needs of the industries, and expressed the hope that the helpful spirit of co-operation animating the conferences might always continue.

APPENDIX I.

MONTHLY STATEMENT OF MAIZE GRADED.

JULY 1st 1927 TO JUNE 30th 1928.

MONTH.	K.2.	K.2SW.	K.3.	K.3SW.	K.6.	K.7.	K.8W.	K.8N.	K.8NSW.	Total Graded.	Wet.	Musty.	Weevily.	Other Causes.	Total Rejected.	Total Received.	Re- bagged.
1927—																	
July .. ..	..	10,164	..	..	..	..	..	..	..	10,164	..	..	225	37	262	10,426	37
August .. ..	..	14,935	..	277	..	..	..	..	..	15,212	..	..	42	251	293	15,505	248
September .. ..	..	2,130	..	..	..	1,889	1	..	218	4,238	2,043	1	10	13	2,067	6,305	13
October .. ..	..	112	..	..	..	14,799	..	..	794	15,705	12,473	20	527	1	13,021	28,726	4
November	1,929	..	..	..	..	6,099	..	..	1,641	9,669	5,109	135	2,881	244	8,369	18,038	28
December	20,633	3,090	264	..	..	1,303	..	..	909	26,199	5,786	1,560	1,438	175	8,959	35,158	185
1928—																	
January	111,690	2,051	3,855	..	..	103	667	73	..	118,439	16,217	263	1,267	42	17,789	136,228	496
February	143,982	2,198	4,315	..	44	270	20	2,577	830	154,236	4,284	193	2,946	275	7,698	161,934	457
March	51,068	5,983	2,544	..	2	213	118	757	1,412	62,097	1,565	1,557	908	439	4,469	66,566	277
April	18,560	5,248	134	..	1	214	8	115	..	24,280	815	128	283	..	1,226	25,506	157
May .. ..	..	..	..	..	..	Nil	..	..	..	..	..	..	..	Nil	..	..	..
June .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
TOTALS ..	347,862	45,911	11,112	277	47	24,890	814	3,522	5,804	440,239	48,292	3,857	10,527	1,477	64,153	504,392	1,500

APPENDIX II.

STATEMENT OF " WET MAIZE " SHOWING
PLACES OF ORIGIN.

JULY, 1927—JUNE, 1928.

<i>Station.</i>				<i>No. of bags.</i>			<i>Percentage.</i>
Turbo	...	...	...	5,202	...		15.8
Kitale	...	...	...	12,228	...		15.4
Njoro	...	...	...	1,281	...		15.3
Nakuru	...	...	...	5,389	...		15.3
Olabanaita	...	...	...	353	...		14.3
Menengai	...	...	...	133	...		15.5
Rongai	...	...	...	565	...		15.0
Karatina	...	...	...	10,117	...		17.4
Eldoret	...	...	...	311	...		14.8
Hoey's Bridge	...	...	...	1,030	...		15.4
Leseru	...	...	...	358	...		15.4
Sabatia	...	...	...	193	...		14.2
Kisumu	...	...	...	220	...		15.8
Taveta	...	...	...	550	...		14.0
Nyeri	...	...	...	857	...		15.7
Sagana	...	...	...	2,880	...		16.6
Fort Hall	...	...	...	2,549	...		19.8
Thika	...	...	...	516	...		17.7
Ruiru	...	...	...	228	...		17.5
Maragua	...	...	...	1,326	...		16.7
Nairobi	...	...	...	224	...		17.5
Muhoroni	...	...	...	224	...		15.0
Punda Milia	...	...	...	17	...		15.0
Lake Solai	...	...	...	25	...		16.8
Kampi ya Moto	...	...	...	56	...		17.0
Kikuyu	...	...	...	112	...		15.0
Rain	...	...	...	1,348	...		—
				48,292			

APPENDIX III.

MAIZE GRADING ACCOUNT.

1ST JULY, 1927, TO THE 30TH JUNE, 1928.

<i>Expenditure.</i>		<i>Revenue.</i>	
Salaries—	Shs. Cts.	Grading and Inspection Fees, <i>i.e.</i> —	Shs. Cts.
Graders and Inspectors	... 16,004 20	Maize	...
Clerk	... 2,400 00	504,392 bags	30,263 52
Labour	... 1,906 97	Beans	... 485 00
Sundry Expenses	... 1,302 62	Potatoes	... 5,772 60
Travelling Expenses	... 1,280 66	Fumigating	... 7 50
Pasages (Proportionate)	... 2,160 70		
Office Rent (Proportionate)	... 125 00		
Housing Provision (Proportionate)	... 2,416 15		
Medical Services (Estimated)	... 838 20		
<i>Balance : Excess Revenue over Expenditure</i>	8,094 12		
	Shs. 36,528 62		Shs. 36,528 62

APPENDIX IV.

MAIZE CONDITIONING ACCOUNT.

1ST JULY, 1927, TO THE 30TH JUNE, 1928.

<i>Expenditure.</i>	Shs.	Cts.	<i>Revenue.</i>	Shs.	Cts.
Salaries—					
Graders and Inspectors	4,563	98	...	33,031
Mechanics	10,330	05	...	856
Clerk	2,400	00	...	...
Labour	10,523	30	...	...
Sundry Expenses and Spare Parts	11,564	44	...	274
Travelling Expenses	182	50	...	60
Passages (Proportionate)	1,477	23	...	9,397
Office Rent (Proportionate)	125	00	...	31
Housing Provision (Proportionate)	1,802	40	...	...
Medical Services (Proportionate)	531	31	...	...
	Shs. 43,560	21		Shs. 43,560	21

APPENDIX VI.

DRAFT GRADING OF WHEAT RULES, 1928.

(*Agricultural Produce Export Ordinance, 1921.*)

1. These Rules may be cited as " the Grading of Wheat Rules, 1928," and shall take effect from, 1928.

2. In these Rules " wheat " shall mean the grain of *Triticum vulgare* and *Triticum durum*.

3. It shall be unlawful for any person to export or permit to be exported or attempt to export any wheat unless and until such wheat shall have been inspected by the inspector at Kilindini Wharf or Mbaraki Pier or at such place at the Coast as the Director of Agriculture may from time to time prescribe.

4. A certificate, hereinafter called an " Exportation Certificate," shall be issued by the inspector to the owner or shipper of a consignment of wheat which has been inspected and passed as fit for export.

5. There shall be two grades and an undergrade of the description set forth in the Schedule to these Rules. Exportation Certificates may be issued for the following named varieties, viz. : " Kenya Governor " (G), " Equator " (E), and " Durum " (D). The name of these varieties shall appear on the Exportation Certificate and the letter in parenthesis after each variety shall appear on the bags together with the Grade Mark. In addition to the above, Exportation Certificates may be issued for any other variety, but the name shall not appear on the certificate and the bags shall be marked with the Grade Mark and the letter " W " only.

6. The owner or shipper shall notify the inspector, giving particulars of the consignment, *i.e.*, name of ship on which space has been provided, consignee, destination, number of bags.

7. Such notification shall be given at least four clear days before shipment is due and delivery at the places mentioned in Rule 3 shall, if required, be made at least two clear days before shipment.

8. Inspection shall ordinarily be made within fourteen days of shipment; if in the opinion of the inspector it is necessary, re-inspection may be made at any time after the original inspection and the grade may thereupon be altered.

9. The exportation certificate shall be delivered to the shipper only on production of the " shipping order " or " bill of lading."

10. Every bag of wheat in a consignment shall be examined before a certificate is granted in respect of such consignment.

11. It shall be lawful for the inspector to abstract, remove and retain samples from each bag examined, provided that the sample from any one bag shall not exceed one-half of one per cent. of the total contents of that bag.

12. No wheat shall be permitted to be exported which is found on inspection to be shrivelled, weevily, musty, smutty, to contain more than 13 per cent. moisture as determined by Brown-Duval apparatus or which is otherwise commercially objectionable.

Smutty wheat shall be wheat which has an unmistakable odour of smut or which contains spore balls or portions of spore balls in excess of a quantity equal to two balls of average size in 50 grams of wheat.

Shrivelled wheat shall be, in the case of bread wheats, wheat which is found to weigh less than 57 lbs. to the bushel, and in the case of durum wheats less than 55 lbs. to the bushel.

All percentage of foreign matter, mixture of wheat and noxious weeds shall be expressed as a percentage by weight of the sample used for the determination.

The bushel weight shall be determined by means of a standard bushel weight tester.

13. Wheat intended for export shall be contained in new twill bags, " A " quality, $2\frac{1}{2}$ lbs. weight, 8 x 8 (Porter and Shot), in good condition, and securely doubly sewn with overlapping edges.

14. Each bag of wheat graded in accordance with these Rules shall be branded with a " K " and the number of the grade within a ring.

15. Upon receipt of notice from the inspector, wheat which is found on inspection or re-inspection to be weevily shall be removed forthwith by and/or at the expense of the owner or owners to a place set aside for such produce.

16. All wheat rejected by the Grader shall be removed by and/or at the expense of the owner from the wharf sheds not later than the fourth day after such rejection, provided that wheat rejected on account of dampness may be re-conditioned for inspection.

17. Weevily wheat shall be stored separately from other wheat, or at the Government Conditioning Plant pending treatment.

18. A charge shall be made by the inspector at the rate of 12 cents per bag in respect of all wheat submitted for grading under these regulations, and payment therefor shall be made prior to issue of certificate or removal of wheat. If wheat has been removed and later re-submitted for inspection the same charge shall again be levied.

19. The Government shall not be held responsible for any loss which may be sustained in connection with wheat forwarded for export, and shall not undertake any responsibility in respect of any certificate which may be issued under these regulations.

20. Revoke all previous Rules.

SCHEDULE.

WHEAT.

*Grade Mark
to be shown
on bags.*

Grade.

Description.

K 1 ...	First Grade ...	Shall be wheat which contains not more than 2 per cent. of foreign matter, which does not contain more than 5 per cent. of any other variety of bread wheat and not more than 5 per cent. of durum wheat, and which has a weight per bushel of not less than 61 lbs.
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SCHEDULE.—(Contd.).

*Grade Mark
to be shown
on bags.*

Grade.

Description.

K 2 ...	Second Grade	Shall be wheat which contains not more than 3 per cent. of foreign matter, which does not contain more than 5 per cent. of any other variety of bread wheat and not more than 5 per cent. durum wheat, and which has a weight per bushel of not less than 59 lbs.
K 3 ...	Undergrade ...	Shall be wheat which contains not more than 4 per cent. of foreign matter, which does not contain more than 5 per cent. of any other variety of bread wheat, and not more than 5 per cent. of durum wheat, and which has a weight per bushel of not less than 57 lbs.
K 1 D	Grade 1 Durum	Shall be wheat of any variety or varieties of durum which contains not more than 2 per cent. of foreign matter and not more than 10 per cent. of bread wheat and which has a weight per bushel of not less than 59 lbs.
K 2 D	Grade 2 Durum	Shall be wheat of any variety or varieties of durum which contains not more than 3 per cent. of foreign matter and not more than 10 per cent. of bread wheat and which has a weight per bushel of not less than 57 lbs.
K 3 D	Undergrade Durum	Shall be wheat of any variety or varieties of durum wheat which contains not more than 4 per cent. of foreign matter and not more than 25 per cent. of bread wheat and which has a weight per bushel of not less than 55 lbs.

